

**CONTAINMENT PLENUM FOR LASER IRRADIATION AND REMOVAL OF
MATERIAL FROM A SURFACE OF A STRUCTURE**

Abstract of the Invention

A containment plenum is adapted to deliver laser light to an interaction region of an inhabitable structure to remove material from the structure. The containment plenum includes a plenum housing adapted to be coupled to a source of laser light. The containment plenum further includes a window substantially transparent to the laser light. The window is mounted within the plenum housing to transmit the laser light in a downstream direction and to provide a barrier to upstream transport of particulate matter generated by interaction of the laser light and the structure. The containment plenum further includes a nozzle fluidly coupled to a source of compressed gas. The nozzle is mounted downstream of the window whereby the laser light and the compressed gas are transmitted through the nozzle in the downstream direction to the interaction region of the structure. The containment plenum further includes a resilient interface coupled to the plenum housing and adapted to resiliently contact the structure and to substantially surround the interaction region, thereby confining the material and removing the material from the interaction region.

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